Assume you wish to borrow $400,000 and you are evaluating several mortgage choices. The first option is a 4.25% fully amortizing, monthly payment, fixed rate loan for 30 years with $2000 in origination fees and no points. The second option is a rate of 4.00% with the payment of .974 discount points with all other terms identical to the first loan. Finally, the third option is a rate of 3.875% with the payment of 2.5 discount points, and a 2% prepayment penalty (calculated as a percentage of the original loan amount) , and all other terms identical to the first loan.

a. Compute the annual percentage rate for each loan if it is held for the entire 30 years. Assume there are no extra payments made.

b. Compute the effective rate (not the EAR, just what you will actually pay over the time you hold the loan), assuming that you will pay the loan off after 5 years and that you never pay more than the required payment prior to that time.

c. Which loan is better if you hold the loan to maturity and why?

d. Which loan is better if you pay off the loan in 5 years and why?